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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,066	04/16/2001	Paul Lucian Regulinski	1483-16	3888

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EXAMINER	
EWART, JAMES D	

ART UNIT	PAPER NUMBER
2683	11

DATE MAILED: 04/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/835,066	REGULINSKI ET AL.	
	Examiner	Art Unit	
	James D Ewart	2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *amendment A filed 01 March, 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Arguments

1. Amendments to figures 1 and 2a have not been received.

2. The rejections to the specification on page 12, line 11 and page 23, line 19 have been withdrawn.

3. The objection to claim 19 has been correctly amended by Applicant and therefore the objection has been withdrawn.

4. The 35 USC § 112 Rejections to claims 17 and 18 have been correctly amended by applicant and the rejections are withdrawn.

5. The applicant's arguments regarding prior art rejections, filed March 1, 2004, have been fully considered by the Examiner, but they are not deemed to be persuasive. Applicant suggests that the provisional application of this nonprovisional application 09/835,066 are different and that figures 6a-6b are not in the provisional application. Examiner agrees that the provisional and nonprovisional are not identical, but each contain similar limitations. For example, in claims 2 and 3 where figure 6a is cited, the provisional application discusses the limitations of claims 2 and 3 on page 4, Line 23 to Page 5, line 12. Examiner further notes that other citations were used in the citations where reference to figures 6a-b occurred.

Drawings

6. Figure 1 has a 4 label but does not have a 4a label as indicated in the specification on page 9, line 6. Instead of putting a switch (X) symbol in each box, examiner requests that applicant put the nomenclature in each box i.e. MSC...

Specification

7. Two items are labeled 8c and 6c are shown in figure 1, but are not explained in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless – (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 1-7, 9, 11-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Karabinis et al. (U.S. Patent Publication No. 2002/0090942).

Referring to claim 1, Karabinis et al. teaches a communications system comprising a satellite mobile communications network which comprises a plurality of satellites (0040, 0044, and 0176) and a plurality of user terminals communicating on satellite uplink and downlink bands (0048); and a terrestrial mobile communications network which comprises a plurality of base stations (Figure 5 and 0163) and a plurality of user terminals communicating on terrestrial uplink and downlink bands (0048); characterized in that at least one of the terrestrial bands at least partly reuses at least one of the satellite bands (0036 and 0047).

Referring to claim 2, Karabinis et al. further teaches in which said base stations comprise second base stations reusing said satellite bands, said second base stations being provided only in areas where the path from said satellites to the user terminals will be shadowed (0037, Figure 5 and Figure 6a).

Referring to claim 3, Karabinis et al. further teaches in which said areas are enclosed spaces (0037, Figure 6A and 0135).

Referring to claim 4, Karabinis et al. further teaches in which said areas are urban areas (0037, 0163, 0135 and Figure 6a).

Referring to claim 5, Karabinis et al. further teaches in which said satellite mobile communications network communicates in frequency-divided fashion, using relatively narrow frequency channels within said bands (0044, 0163 and Figure 6b). FDMA/TDMA

Referring to claim 6, Karabinis et al. further teaches in which said terrestrial mobile communications network communicates in code-divided fashion, using relatively wide frequency channels within said bands (0044).

Referring to claim 7, Karabinis et al. further teaches in which said terrestrial uplink and downlink bands at least partly reuse said satellite downlink band (Figure 6b and 0212)

Referring to claim 9, Karabinis et al. further teaches in which said terrestrial uplink and downlink bands at least partly reuse said satellite uplink band (Figure 6b and 0212).

Referring to claim 11, Karabinis et al. further teaches in which said terrestrial uplink band reuses said satellite uplink band, and said terrestrial downlink band reuses said satellite downlink band (0050).

Referring to claim 12, Karabinis et al. further teaches in which said terrestrial downlink band reuses said satellite uplink band, and said terrestrial uplink band reuses said satellite downlink band (0051).

Referring to claim 13, Karabinis et al. further teaches a channel allocator allocating channels to be used by at least one of said networks, in dependence upon the frequencies allocated to the other (0039 and 0162).

Referring to claim 14, Karabinis et al. further teaches in which the channel allocator is arranged to control the frequencies allocated to both said networks (0039).

Referring to claim 15, Karabinis et al. further teaches in which the channel allocator is arranged to allocate a channel for use by a terminal to communicate with one of said networks initially from a set of frequencies not used by the other said network in the region of the terminal, where such a non-interfering frequency is available (0162).

Referring to claim 16, Karabinis et al. further teaches in which the channel allocator is arranged to allocate a channel for use by a terminal to communicate with one of said networks from a set of frequencies also used by the other said network in the region of the terminal, provided that less than a predetermined measure of interference is thereby reached (0064, 0065 and 0190).

Referring to claim 17, Karabinis et al. further teaches in which said level is determined by a number of said channels (0190).

Referring to claim 18, Karabinis et al. further teaches in which, when said level is reached, the channel allocator is arranged to use frequency planning and terminal and network location information to dynamically allocate shared frequency channels (0064, 0069, 0190, 0211 and Figure 6a).

Referring to claim 19, Karabinis et al. further teaches a dual mode user terminal for use in a system according to any claim 1 (0045, 0074, 0075).

Referring to claim 20, Karabinis et al. further teaches in which there is provided a common radio frequency circuit shared by a satellite system control circuit and a terrestrial system control circuit (0039).

Referring to claim 21, Karabinis et al. further teaches arranged to cease usage of frequencies shared between the satellite and terrestrial systems on detection of predetermined conditions associated with the proximity of said terrestrial mobile communications network, to prevent interference therewith (0211, 0277, and 0281).

Referring to claim 22, Karabinis et al. further teaches in which the predetermined conditions comprise detection of a control signal transmitted by a said satellite (0037, 0092, 0219, 0220 and 0232).

Referring to claim 23, Karabinis et al. further teaches in which the predetermined conditions comprise detection of a signal transmitted by a said base station (0078, 0223, and 0235).

Referring to claim 24, Karabinis et al. further teaches, in which the predetermined conditions comprise detection of a signal transmitted by a user terminal in the terrestrial uplink band (0078 and 0092).

Referring to claim 25, Karabinis et al. further teaches a satellite communications network for use in the system of claim 1 (0044, 0165, and 0176).

Referring to claim 26, Karabinis et al. further teaches comprising a control station arranged to reduce use of said satellite downlink and/or uplink in regions around one of slid base stations (0037, 0039, 0162 and Figure 6A).

Referring to claim 27, Karabinis et al. further teaches comprising a control device arranged to transmit a control signal to satellite user terminals in regions around one of said base stations to cause said user terminals to reduce use of said satellite uplink (0037, 0039, and 0162)

Referring to claim 28, Karabinis et al. further teaches a terrestrial communications network for use in the system of claim 1 (0160).

Referring to claim 29, Karabinis et al. further teaches comprising a control device arranged to transmit a control signal to satellite user terminals in regions around one of said base stations to cause said user terminals to reduce use of said satellite uplink (0162 and 0163).

Referring to claim 30, Karabinis et al. teaches a method of allocating communications spectrum to base stations of a terrestrial mobile communications network (0162), in which a frequency band interferes with channels of a satellite communications system (0030 and 0162, comprising allocating said frequency band preferentially to base stations in areas where shadowing will reduce the level of communications with the satellites of said satellite communications system (0032, 0037, 0163 and Figure 6a).

Referring to claim 31, Karabinis et al. teaches a method of reusing frequency bands between base stations of a terrestrial mobile communications network and a satellite communications network (Figure 6b and Figure 6c), comprising allocating said frequency bands using integrated resource management and other mitigation techniques (0039, 0065-0067) in a way to minimize interference between both the systems and thus making optimum usage of valuable frequency spectrum (0162).

Referring to claim 32, Karabinis et al. teaches a communications system comprising a satellite mobile communications network which comprises a plurality of satellites (0040, 0044, & 0176) and a plurality of user terminals communicating on satellite uplink and downlink bands (0048); and a terrestrial mobile communications network which comprises a plurality of base

stations (Figure 5 and 0163) and a plurality of user terminals communicating on terrestrial uplink and downlink bands (0048), the system comprising: a controller to perform frequency planning based on a position of a selected one of the plurality of user terminals (0032 & 0036) wherein the selected user terminal operates in a frequency designated by the controller, the designated frequency being in one of the terrestrial bands that at least partly reuses at least one of the satellite bands (0032, 0039 & 0162).

Referring to claim 33, Karabinis et al. further teaches wherein at least one of the plurality of base stations calculates the position of the selected user terminal, the controller using the calculated position to perform the frequency planning (0023, 0037, 0162 & 0163).

Referring to claim 34, Karabinis et al. teaches a communications system comprising a satellite mobile communications network which comprises a satellite communicating on satellite uplink and downlink bands (0048); and a terrestrial mobile communications network which comprises a base station communicating on terrestrial uplink and downlink bands (0048), the system comprising: a dual-mode user terminal capable of communicating with the satellite using the satellite uplink and downlink bands and capable of communicating with the base station using the terrestrial uplink and downlink bands (0045, 0074 and 0075), the user terminal communicating on one of the terrestrial bands that at least partly reuses at least one of the satellite bands (0036 and 0047) and comprising: a controller to detect transmissions between the base station and the satellite on an operational frequency in the satellite uplink and downlink

bands (0211, 0277 and 0281), the controller causing the user terminal to cease using the operational frequency upon detection of the transmission (0211, 0277 and 0281).

Referring to claim 35, Karabinis et al. further teaches wherein the controller causes the user terminal to switch to a frequency other than the operation frequency upon detection of the transmission (0211, 0277 and 0281).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 8 and 10 are rejected under 35 USC 103(a) as being unpatentable over Karabinis et al. (U.S. Patent Publication No. 2002/0090942) and further in view of Karabinis et al. (U.S. Patent Publication No. 2002/0090942).

Referring to claim 8, Karabinis et al teaches the limitations of claim 8, but in this embodiment he does not teach wherein terrestrial bands do not reuse said satellite uplink band. In an alternative embodiment Karabinis et al teaches wherein terrestrial bands do not reuse said satellite uplink band (Figure 6d and 6e). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Karabinis et al

with the teaching of Karabinis et al to minimize interference between the satellite and terrestrial components (0030).

Referring to claim 10, Karabinis et al teaches the limitations of claim 10, but in this embodiment he does not teach wherein said terrestrial bands do not reuse said satellite downlink band. In an alternative embodiment Karabinis et al teaches wherein terrestrial bands do not reuse said satellite downlink band (Figure 6d and 6e). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Karabinis et al with the teaching of Karabinis et al wherein said terrestrial bands do not reuse said satellite downlink band to minimize interference between the satellite and terrestrial components (0030).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D Ewart whose telephone number is (703) 305-4826. The examiner can normally be reached on M-F 7am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (703)308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Ewart
April 20, 2004

WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600